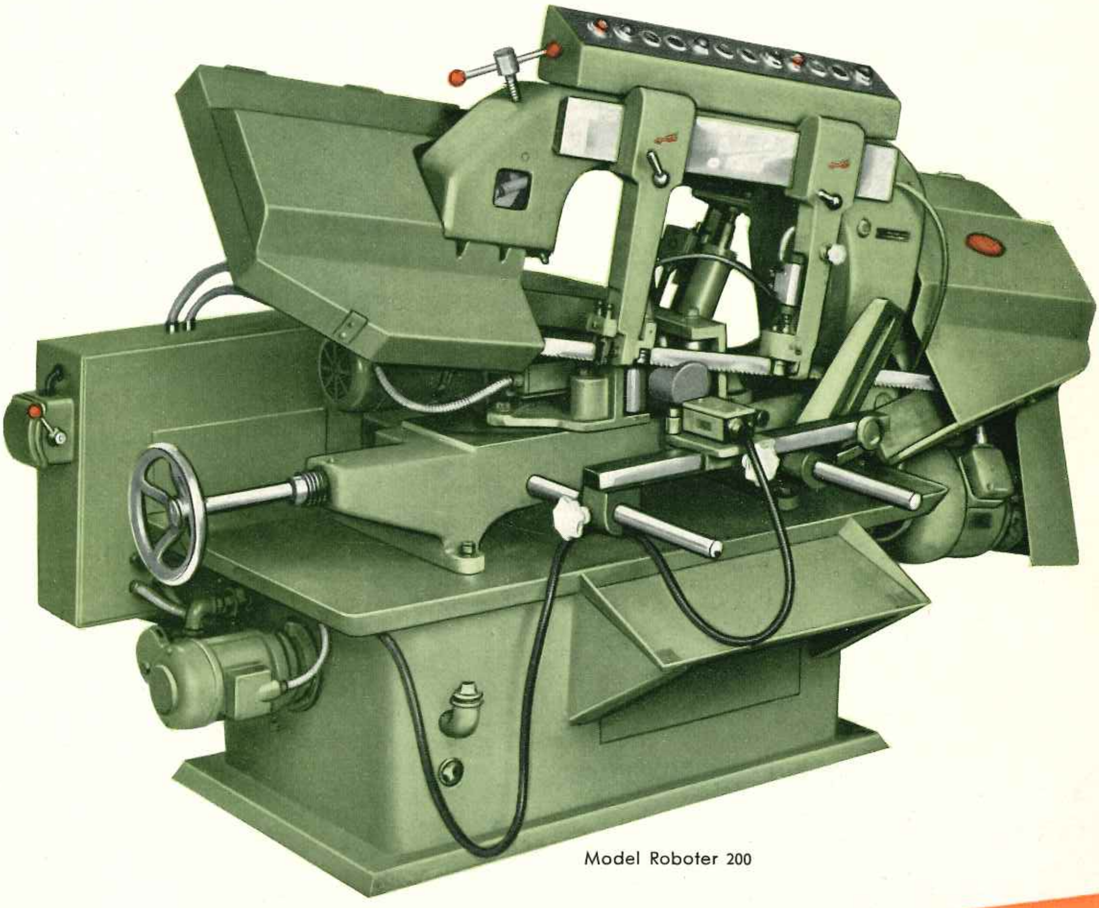
PEHAKA

CUT-OFF BANDSAWS

Rec'd 9/14/66



Model Roboter 200

- ✻ Hydraulic Saw Feed
- ✻ Low Tool Costs
- ✻ Minimum Cutting Loss
- ✻ Continuous Bandsawing

CONTINENTAL MACHINE TOOL CO.
1231 WEST FIFTH STREET
LOS ANGELES, CALIFORNIA 90017

PEHAKA FULLY AUTOMATIC PRODUCTION CUT-OFF BANDSAWS

Models ROBOTER 200 S, 200 SL

Here is a rugged machine with **complete automatic** cycle for cutting off most economically bar stock, tubes, structurals etc. of approx. 12 — 200 mm ($^1/_2$" — 8") diameter.

The operator simply loads the machine by feeding the stock into **draw-in rollers.** Length of section to be cut is preset by adjusting a limit stop switch with electric relay that starts lowering of saw frame. At completion of cut a hydraulic cylinder lifts saw frame to any preset height, material is fed to limit stop for next cutting cycle. No time is lost, for opening of vice and reclamping stock, **PEHAKA offers the quickest method of stock feeding.**

A hydraulic feed regulating attachment automatically regulates cutting feed and pressure corresponding to varying material sections. (see also description next page).

Controls are grouped on panel in convenient reach for operator. Coloured signal lamps indicate proper functioning of the various units.

Limit Stop for any length up to 24" (40" or 79" stops optional).

Cutting remainders of approx. 170 mm (7") length are thrown out backward to avoid possible jamming of saw blade.

A horn gives acoustic sign after completion of last cut (optional). The quick action vice is adjusted by handwheel.

There are no idle times:

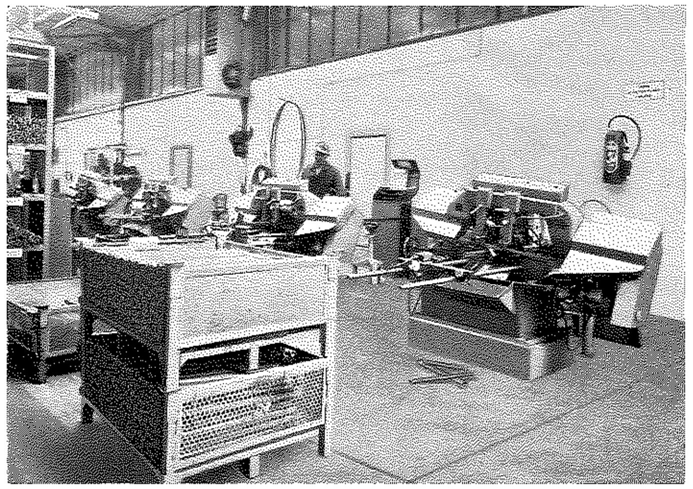
No manual lifting of saw frame

No manual adjustment of saw frame

No manual stock feed

No switching-on and-off after each cut

No control of sawing process necessary



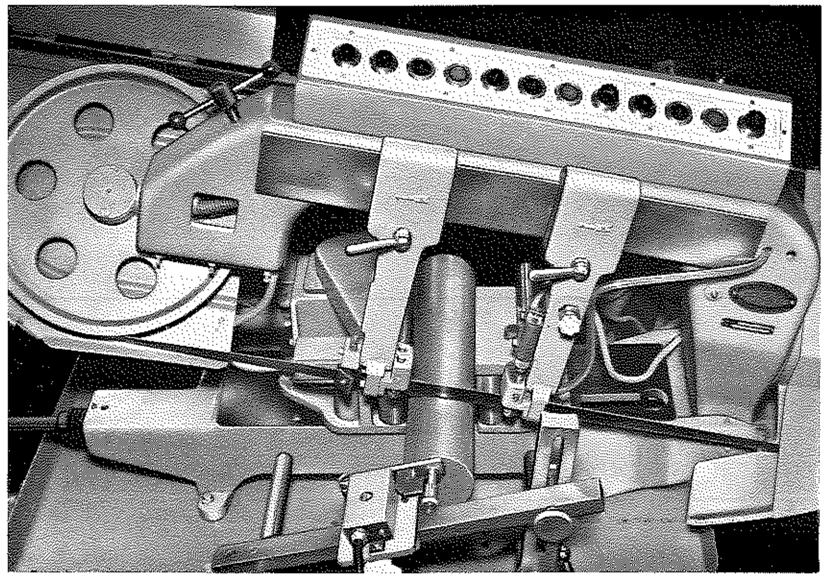
A battery of PEHAKA Roboters in a boiler maker's factory!
Watch cut and stacked tubes!

Solves your cutting problems the most economical way!

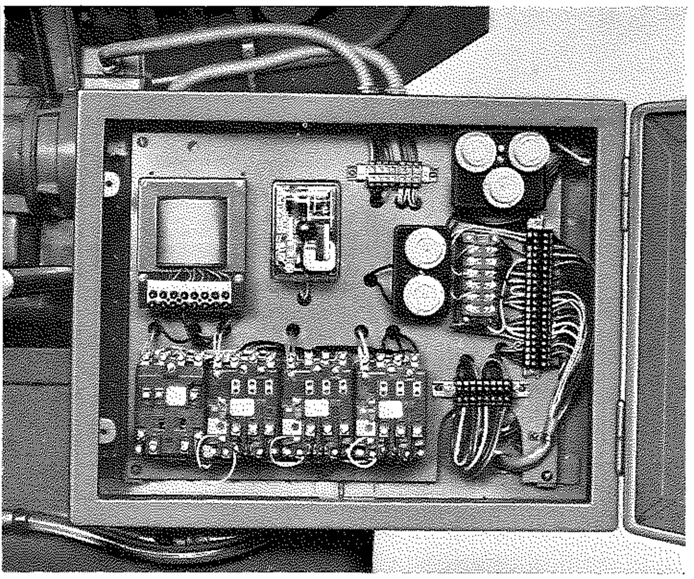
The **time- and money saving** PEHAKA Roboter pays off within a short time, even when only cutting small sections, due to the very small quantity of swarf removed per cut, whereas other methods remove large chips, thus saving tons of material over a year. Operating is simple and can be mastered with a little training, production rates go up and costs down using the PEHAKA Roboter.

No matter how many duplicate pieces are required, the operator only has to set stop at required length, feed material into draw-in rollers, clamp, adjust correct speed and start machine by pressing push buttons. The daily saving of manhours can easily be estimated. Employing an electric counter (optional) the machine is even more free from man's attention, the Roboter does its work at meal times and after works have closed!

Roboting your stock ensures highest possible economy and more day's work with a minimum of costs for tools, power, chip waste, labour!

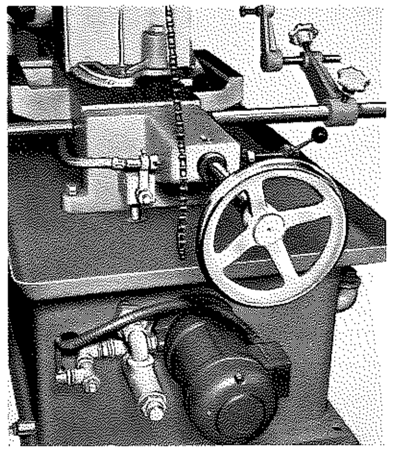


Close view of Roboter shows rugged saw frame, guide arms, disc typewheels, hydraulic feed regulating attachment, feeding rollers, limit stop and control panel.

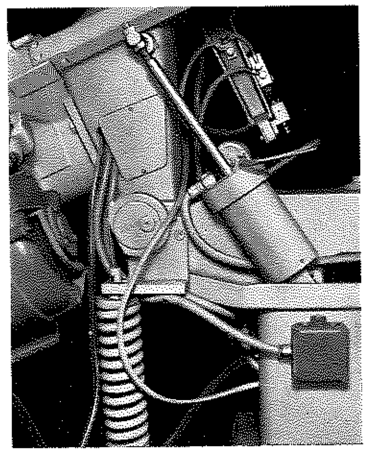


Switch box of Roboter with thermal overload relays, time relay, transformer, fuses etc.

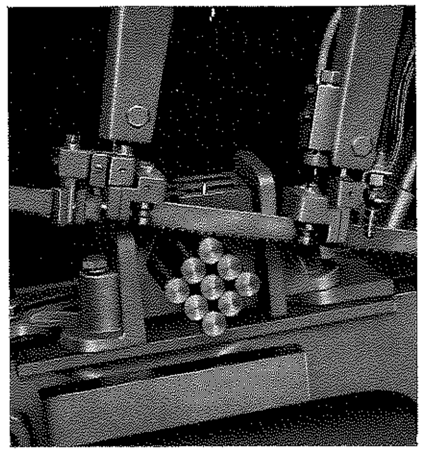
Extra Accessories (Further extras see offer)



Hydraulic Pump and Reverse valve on No. 31 Semi-Automatic Control



Part Backview of Semi-Automatic HS 260



Holding Fixture for Bundles
(optional, No. 90)
Maximum opening approx. 85x85 mm ($3^7/_{16}$"x$3^7/_{16}$") for simultaneously clamping several work pieces. For use on Roboter only in connection with additional vice No. 92 and semi-automatic use of machine

Semi-Automatic Control

(optional, No. 31)

has been designed to give **maximum possible production** where it is not practicable or economical to use the fully automatic Roboter, such as for „short runs" and where the material to be cut is constantly varying in length. On the semi-automatic machines the saw frame is automatically lifted on completion of each cut and when cutting material of equal length the operator only has to feed stock forward as the frame moves **up and down automatically.**

This results in considerable **reduced labour and time,** with **increased production.** Cutting times are reduced through **hydraulic (positive) downward pressure** registered through a pressure gauge.

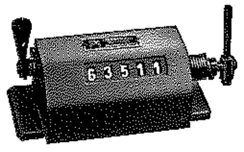
Semi-automatic controls are available for models:

HS 260	20— 60 or 12— 60 m/min (60—195 or 40—195 FPM)
HSL 260*)	20—200 or 12—200 m/min (60—660 or 40—660 FPM)

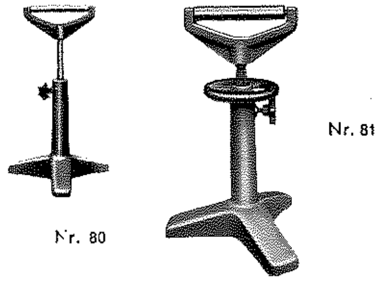
All types employ the following **features:**

- a special hydraulic cylinder and pressure gauge
- a powerful spiral re-action spring that tensions as saw frame is forced downwards hydraulically
- a reversing valve to reverse the oil flow and start uplift of frame
- a maximum pressure valve
- a stronger 1.1 HP motor and larger infinitely variable gear size for HS 260 20—60 m/min

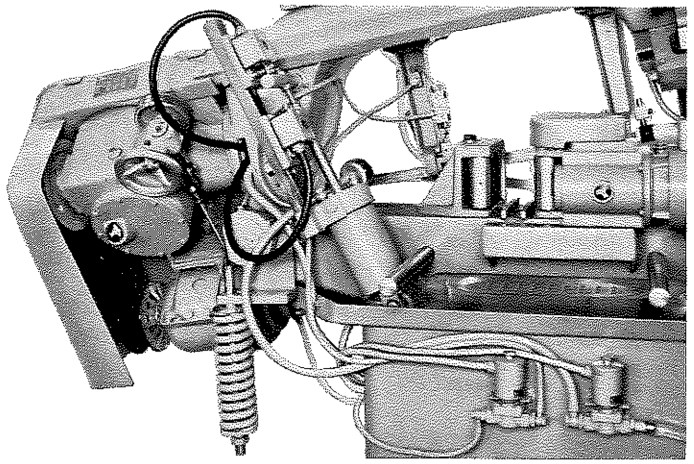
*) Optional No. 51 recommended.



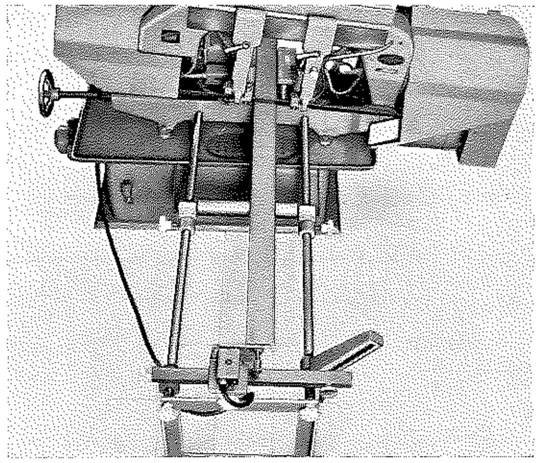
Electric Counter
(optional No. 110)
stops machine automatically when preset number of cuts is completed.



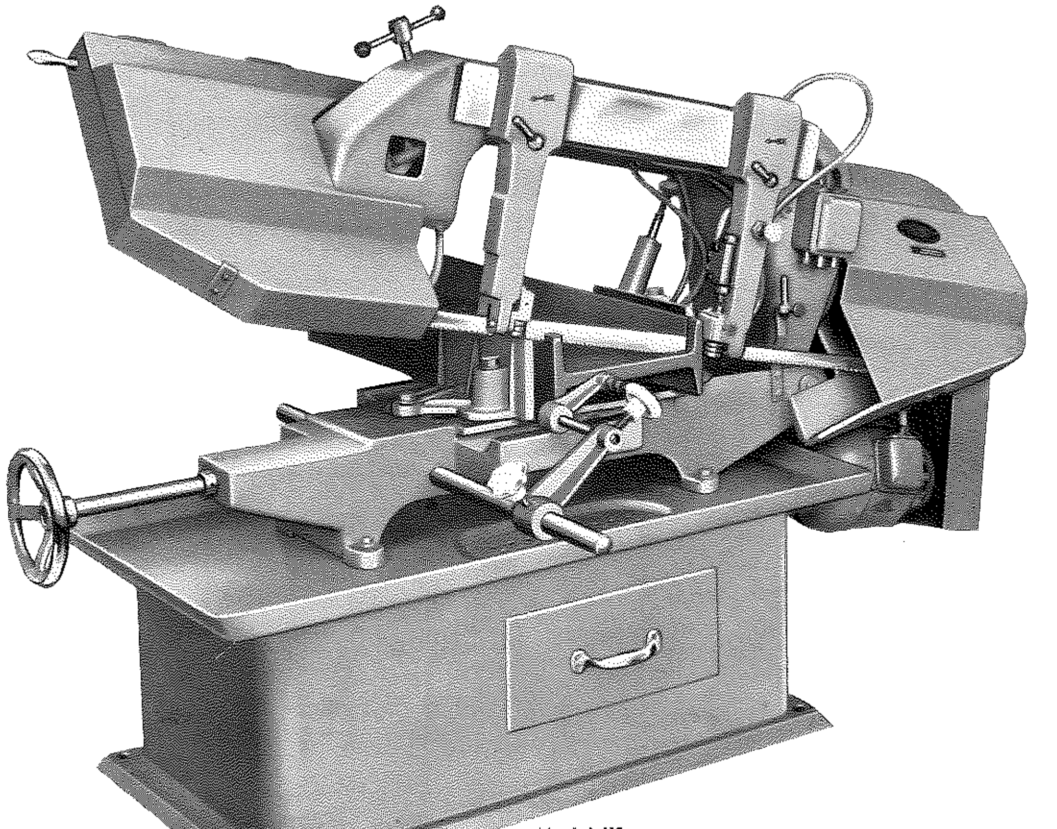
Material Support Stands
(optional)
Adjustable, No. 81 has fine adjustment through handwheel and needle bearings, especially for model Roboter.



Hydraulic Positive Cutting Pressure on Model Roboter 200
controlled by magnetic valves, reduces cutting times! Recommended to speed up production, for the use of high alloyed or HSS-saw bands which require adjustable increased downward pressure, to handle the toughest jobs (optional No. 51)



Extended Material Stops
(optional, No. 100, 101)
There is no similar saw allowing automatic cut-off operation up to 40" or even 79" length as PEHAKA does, thanks to its advanced design. Extended stops have been most helpful for sawing tubes, structurals or bar stock.



Model HS 260

PEHAKA Horizontal Cut-Off Bandsaws Models HS 260, HSL 260

non-automatic for sawing off bars, profiles, tubes etc. of ferrous, non-ferrous and light metals **up to 260 mm ∅ (10 1/4").**

The machine has swivel jaw vice mounted to machine bed unit and is adjustable for **angle cuts up to 45°**. The vice is hand-wheel operated over a spindle.

The material stop is adjustable up to 600 mm (24") cut-off length (up to 79" optional).

A hydraulic supporting cylinder ensures smooth and regular feed of saw frame. Feed velocity is adjustable, a locking valve mounted to one saw guide arm serves for stopping frame in any desired position.

A **limit switch** automatically breaks the circuit at the end of cut if preset.

Models HS and HSL 260 incorporate all the advanced design features of the fully automatic Roboter for such sawing operations where the constant sawing of varying lengths prevents effective use of automatic operation. PEHAKA, however, also offer **semi-automatic controls,** see page 5.

Hydraulic Feed Regulating Attachment No. 20

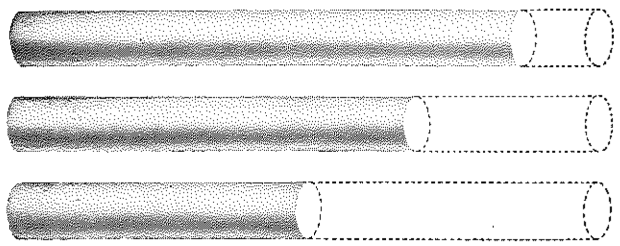
It is essential to fit this ingenious device to each maschine. It is obvious that cutting pressure must be increased when sawing hard und tough materials and thick diameters, even more so with part worn blades. Light pressure is required for sawing thin and soft materials with sharp bands. Cutting pressure and frame downfeed increases as the saw frame is lowered from its upper to the horizontal position as the centre of gravity moves. Compensation by weights is not practicable.

The PEHAKA feed regulating valve has solved this problem.

Actuated by the back edge of the saw band the valve reduces the down-feed of the saw frame when cutting pressure on the saw band is too high. The slowing down results from increased **counter-pressure** of the fluid in the supporting cylinder.

Smaller work piece sections require diminished cutting pressure, the counter-pressure of the fluid in the supporting cylinder is reduced and the frame down-feed increased, limited only to avoid stripping of teeth. This feed regulator valve guarantees, no matter what kind and shape of materials is being sawn, **smooth and elastic accommodation** of cutting pressure and feed. Overloading of saw band is not possible, cutting times are reduced and saw life is extended.

Check Chip waste after 100 cuts:



Only 130 mm (6") stock lost with PEHAKA Cut-Off Bandsaw

but

300 mm (12") costly material wasted with hack saw

500 mm (22") and more with cold saw and other parting methods.

Compared with other parting methods savings in chip waste amount to 2—4 tons a year sawing stock of f. i. 50 mm ∅ (2") 8 hours per day! Even chip savings alone pay off the machine price!

The thickness of a band tool including setting is only 1.2 mm (0.054") while that of a hack saw is 3 mm approx. (0.086") and even more in case of circular saws or other parting methods.

The many thousand teeth of a saw band wear uniformly reducing tool costs, there is **no idle return stroke** and interruption of cutting process, the saw band is working continuously.

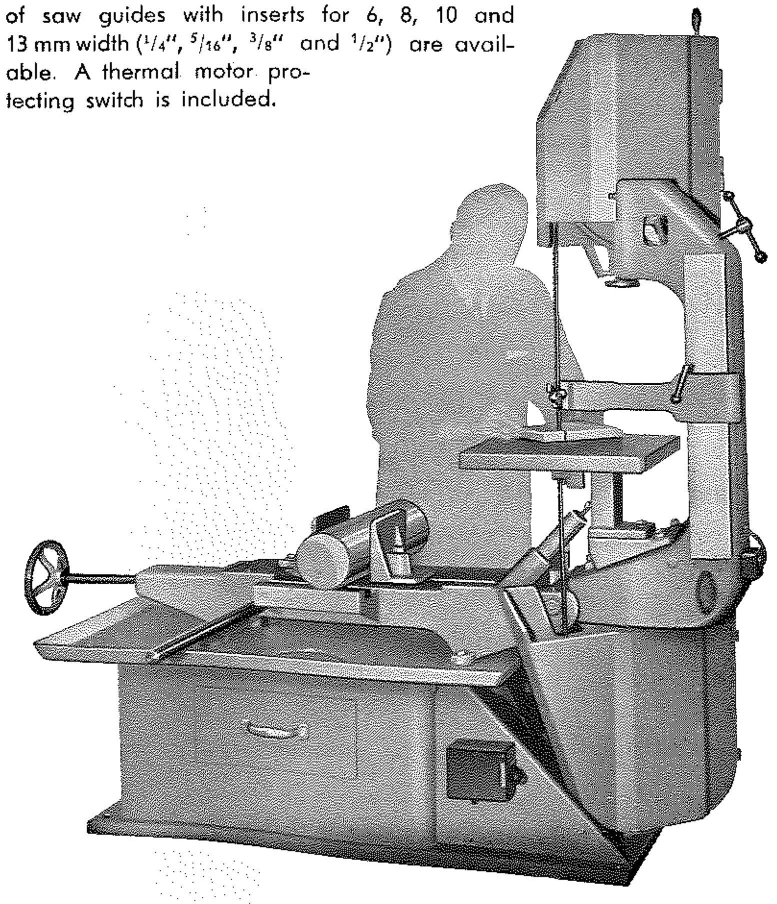
PEHAKA *Bandsaws, from material handling to finished part offer the lowest cost per cut method, for reducing stock to any required size.*

Main Features

Saw Frame:	strong hollow casting
Wheels:	disc-type cast iron for 25 mm (1") wide bands, idler wheel to track and tension saw band, heavy duty, statically and dynamically balanced
Guides:	ball bearing, mounted to rigid guide posts stabilize saw band and guarantee accurate cutting of each and all duplicate pieces. Easily adjustable to stock thickness. Right hand guide with additional guide inserts.
Bed Unit:	strong cast iron
Base:	fabricated steel sheet, welded
Wet Cutting:	complete system consisting of self-priming pump, perforated chip tray, fluid tank, tubing. The coolant is discharged on the saw band in front of work piece
Cutting speed:	stepless variable, adjustable by handwheel, speed indicator and job selector chart
Motor:	for 3 phase A. C. supply, incl. switches
Guarding:	saw wheels covered by hinged doors, additional guards on back of wheels and for saw band
Accessories:	1 saw band 25 mm (1") welded, spanners, operating instructions

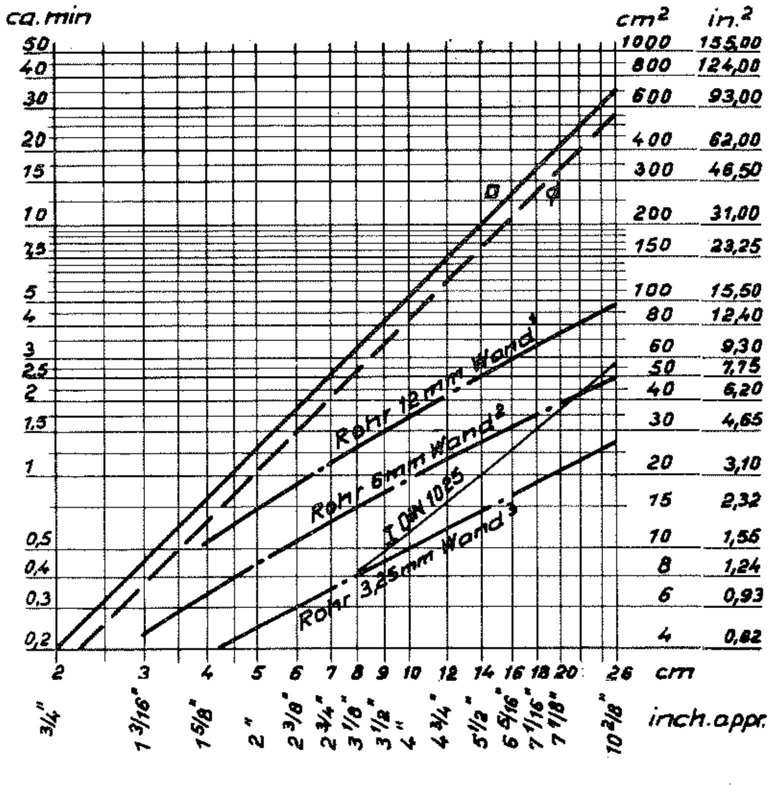
Universal PEHAKA Bandsaw Model HVS 260

In a special arrangement the standard horizontal cut-off saw can be supplied with provision for **vertical cutting operations.** The machine has a table of approximately 400x400 mm (16"x16") size (table tilt aprox. 15° to right and 12° to left optional). For contour sawing a further set of saw guides with inserts for 6, 8, 10 and 13 mm width (1/4", 5/16", 3/8" and 1/2") are available. A thermal motor protecting switch is included.



Cutting Rates

(Steel 50 kg/mm^2 = 32 tons/sq. inch)



□ = square
Rohr 12 = Tube 1/2" wall
" 6 = " 1/4" "
" 3.25 = " 1/8" "

∅ = solid stock
I = Standard Beam
(German DIN 1025)

using standard saw band, cutting rates are increased by using higher quality saws.

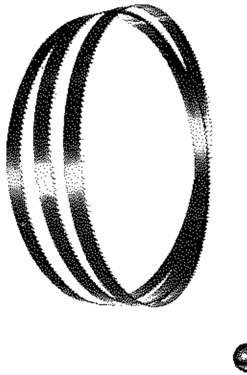
Selection of Right Saw Band Essential

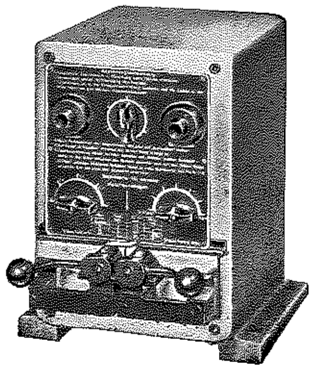
Buy Original PEHAKA Bandsaw Blades for your PEHAKA Machine, available in coils or welded lengths:

Quality "A" for cutting soft metals
" "K" " " semi-hard metals
" "R" " " hard steels
— Super-Alloy Bands —
— High-Speed-Steel Bands —

for handling every cutting job, with 3 to 22 TPI

Recommandation: Order your initial requirements for PEHAKA saw blades with machine, at least 10 bands of various quality and TPI. Do not risk unnecessary interruption of production through sudden lack of saw bands!





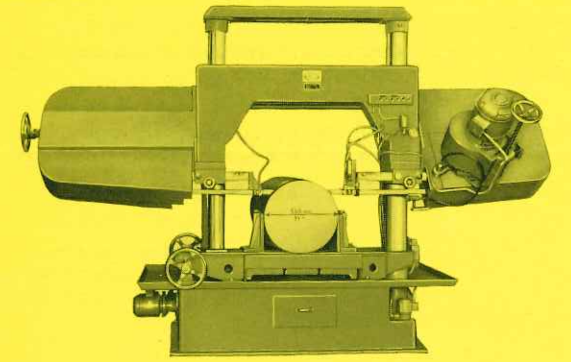
Bandsaw Butt Welder
(optional, No. 492)
for blades 5-25 mm width (1/4"-1") incl. annealer, with mounted blade shear, saw weld grinder No. 500 and saw thickness gauge No. 510

TECHNICAL DATA

Model	Capacity appr. flat mm	Capacity appr. flat inch	square mm	square inch	round mm	round inch	Angle Cutting appr. 30° up to	Angle Cutting appr. 45° up to	Size of Sawband appr. mm	Size of Sawband appr. inch	Size of table mm	Size of table inch
HS 260	370 x 180 or 400 x 150	14½"x 7" or 16" x 6"	220 x 220	8⅝"x 8⅝	260	10¼"	I N P 24 edgewise B S B 117 and 200 mm ∅ (8")	170 mm (7")	3640 to 3720 x 25 x 0.9	143¼ to 146½" 1"x 0.035"	—	—
HSL 260												
HVS 260											400 x 400	16"x 16"
Roboter 200 S Roboter 200 SL	230 x 100	9" x 4"	140 x 140	5½"x 5½"	200	8"	As above, however, employing vice clamps No. 92				—	—

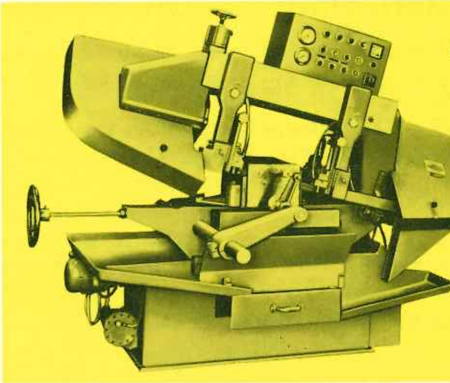
Model	Cutting Speed appr. Standard m/min	Standard FPM	Extra Charge m/min	Extra Charge FPM	Saw drive motor appr. m/min	HP	Number of motors	Floor Space appr. mm	Floor Space appr. inch	Weights NET kg	NET lbs	GROSS (Boxed) kg	GROSS (Boxed) lbs	Shipping Box appr. cbm	cbf
HS 260	20– 60	60–195	12– 60	40 - 195	20–60 12–60	0.75 1.1	1	1860x 800	73"x 32"	360	795	460	1015	1,6	57
HSL 260	20–200	60–660	12–200	40–660		2									
HVS 260	20– 60	60–195	12– 60	40–195	20–60 12–60	0.75 1.1				390	860	490	1080	2.1	74
Roboter 200 S	20– 60	60–195	12– 60	40–195	20–60 12–60	1.1	3	1900x 1100	75"x 45"	520	1150	630	1390	2.6	92
Roboter 200 SL	20–200	60–660	12–200	40–660		2									

Other PEHAKA Cut-Off Bandsaws



Model HS 530

Large capacity cut-off saw, for cutting large die blocks, ingots, billets, forgings, tubes, girders up to **530 mm ∅ (21"), 600 mm (24")** optional. Main features: 800 mm (32") [saw wheels, 38 mm (1½") saw band, variable speed 10–60 or 10–350 m/min (33–195 or 33–1150 FPM) 4 or 5.5 HP saw drive motor.



Model HS 340 and 400

Heavy duty saw to cut solid stock, tubes, profiles up to 340 or 400 mm ∅ (13" or 16"), **semiautomatic cycle,** hydraulic downward pressure, powerful motor, uses 1¼" wide saw bands for **higher production efficiency** – available also with **fully automatic cycle.**

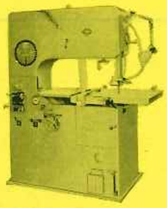
WRITE FOR SPECIAL CATALOGUE!

(Specifications, measurements and design are subject to change without incurring obligations.)

Other PEHAKA Metal Cutting Bandsaws

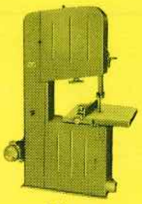
PEHAKA Contour Bandsawing, Filing, Grinding and Polishing Machines
PEHAKA Universal Production Bandsaws
PEHAKA Light Metal Cutting Bandsaws
PEHAKA Friction Cutting Bandsaws

63 PEHAKA Bandsaws for every industrial need!



USF 9-R

USF 4-R



SA 6.3

Band Mill

PETZING & HARTMANN · KASSEL-B.

MASCHINENFABRIK